

Appl. No. 09/811,879

Amdt. Dated June 25, 2004

Reply to Office Action of February 25, 2004

REMARKS

Reconsideration of the application is requested.

Applicants appreciatively acknowledge the Examiner's

~~confirmation of receipt of applicants' claim for priority~~

under 35 U.S.C. § 119(a)-(d). The Examiner noted that

applicant has not filed a certified copy of the priority

~~application as required by 35 U.S.C. § 119(b). On April 18,~~

2001, applicants filed a claim for priority together with the
certified copy of the European Patent Application 001 05
812.2, filed March 18, 2000.

Claims 1-13 are now in the application. Claims 1, 2, and 7
have been amended. Claims 11-13 have been added.

In "Claim Rejections - 35 USC § 103" item 3 on page 2 of the
above-identified Office Action, claims 1-7 and 9 have been
rejected as being obvious over U.S. Patent No. 5,862,458 to
Ishii (hereinafter **ISHII**) in view of U.S. Patent No.
5,991,643 to *Chao-Cheng* (hereinafter **CHAO-CHENG**) under 35
U.S.C. § 103(a).

In "Claim Rejections - 35 USC § 103" item 4 on page 7 of the
above-identified Office Action, claim 8 has been rejected as
being obvious over **ISHII** in view of **CHAO-CHENG** and further in

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view of U.S. Patent No. 5,491,715 to *Flaxl* (hereinafter **FLAXL**) under 35 U.S.C. § 103(a).

In "Claim Rejections - 35 USC § 103" item 5 on page 8 of the
above-identified Office Action, claim 10 has been rejected as
being obvious over **ISHII** in view of **CHAO-CHENG** and further in
view of U.S. Patent No. 6018324 to *Kitchener* (hereinafter
KITCHENER) under 35 U.S.C. § 103(a).

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found in FIGS. 6-8 and on pages 17-20 of the specification of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, a radio station for transmitting signals including:

a modulator modulating a signal to be transmitted;

a power amplifier connected to said modulator for amplifying the modulated signal and producing an output power and a test signal;

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a summing device connected to said power amplifier for subtracting the test signal of the power amplifier from a reference signal to generate a control signal;

an antenna for transmitting and receiving the signals, and a connection from said antenna to ground and a switch in said connection for varying a reactance of said antenna;

an analog-to-digital converter converting the control signal to a digital signal; and

a processor using the digital signal to drive said switch.

The **ISHII** reference discloses an impedance matching circuit in a transmitter circuit. An impedance covering circuit 8 to match the impedance of the power amplifying circuit 2 with the impedance of the antenna 3 (Col.6, lines 9-14).

Clearly, **ISHII** does not show "a connection from said antenna to ground" where "a switch in said connection" is used "for varying a reactance of said antenna" as recited in claim 1 of the instant application.

The **CHAO-CHENG** reference discloses a radio transceiver having a plurality of switchable antennas. More specifically, the patch antennas 14, 15, 16, and 17 are coupled to a processor

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42 via a transceiver circuit 40 and an impedance matching circuit 32.

Clearly, **CHAO-CHENG** does not show "a connection from said antenna to ground" where "a switch in said connection" is used "for varying a reactance of said antenna" as recited in claim 1 of the instant application. Moreover, **CHAO-CHENG** does not overcome the previously discussed deficiencies of **ISHII**.

The **FLAXL** reference discloses an automatic antenna tuning method that matches the resonant frequency of an antenna resonant circuit 18, 46 to the output frequency of a transmitter output stage 26.

Clearly, **FLAXL** does not show "a connection from said antenna to ground" where "a switch in said connection" is used "for varying a reactance of said antenna" as recited in claim 1 of the instant application. Moreover, **FLAXL** does not overcome the previously discussed deficiencies of **ISHII** and **CHAO-CHENG**.

The **KITCHENER** reference discloses self-balancing feed arrangement for an omni-directional dipole antenna. The feed network of **KITCHENER** has a matching network to connect with

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the transmission line structure. The matching network is a printed section formed with discrete components (Col.3, lines 61-65).

Clearly, KITCHENER does not show "a connection from said antenna to ground" where "a switch in said connection" is used "for varying a reactance of said antenna" as recited in claim 1 of the instant application. Moreover, KITCHENER does
not overcome the previously discussed deficiencies of ISHII, CHAO-CHENG, and FLAXL.

In contrast to the references cited in the above-identified Office Action, the instant application as recited in claim 1 includes a patch antenna with a variable reactance. The antenna is connected via a shortening pin with a switch to ground. By opening and closing the switch, the reactance of the antenna 70 is changed. In alternative embodiments, the switch 72 is either operated by an attached signal processing unit that is connected to a processor described above or by the processor itself. (page 13, line 13 to page 18, line 1 of the instant application). FIG. 6 and FIG. 8 show capacitors connected in parallel (FIG. 6) and connected in series (FIG. 8) with the switch in the connection.

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It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

In view of the foregoing, reconsideration and allowance of
claims 1-13 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of one month pursuant to Section 1.136(a) in the amount of \$110.00 in accordance with Section 1.17 is enclosed herewith.

If an extension of time is required, petition for extension is herewith made. Any extension fee associated therewith should be charged to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

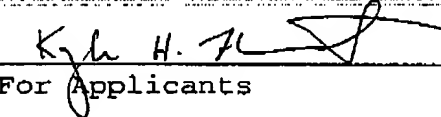
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Please charge any other fees that might be due with respect
to Sections 1.16 and 1.17 to the Deposit Account of Lerner
and Greenberg, P.A., No. 12-1099.

Respectfully submitted,


For Applicants

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KHF:cgm

June 25, 2004

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